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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,993	02/07/2002	Gerhard Fenkart	003875.P001D5.	2660

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EXAMINER

SONG, HOON K

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,993

Applicant(s)

FENKART ET AL.

Examiner

Hoon K Song

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-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 1-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 44-67 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 45, 46-48 and 60-62 rejected under 35 U.S.C. 103(a) as being unpatentable over Deucher (US 5610968).

Regarding claims 45 and 48, Deucher teaches an apparatus which includes:
support frame (A);

CT scanner subsystem (C) rotatably mounted to the frame, the CT scanner subsystem having a gantry defining at least one air passage (60), and a radiator (48) mounted to the gantry;

a plenum (532), the plenum and the gantry jointly defining a confined volume;
and

a fan (58).

However Deucher fails to teach that the plenum is mounted to the frame.

Although Deucher's plenum is mount on the rotating gantry, one would be motivated to design and mount the plenum on the stationary gantry in order to save space and make structurally simpler rotating gantry while providing the air flow from fan to air passage, air passage to confined volume, confined volume to a radiator (figure 4).

Regarding claim 46, Deucher teaches

an. air-conditioning unit (58); and

a duct (figure 4) connecting the air-conditioning unit with the plenum so that air is directed from the air-conditioning unit through the duct into the confined volume (figure 4).

Regarding claim 47, Deucher teaches that the gantry defines an enclosure, the air being directed from the air passage into the enclosure in the gantry and from the enclosure in the gantry through the radiator (figure 4).

Regarding claim 60, Deucher teaches paneling (cover) around the CT scanner subsystem.

Regarding claim 61, Deucher teaches the air enters a housing defined within the paneling after flowing through the radiator (figure 4).

Regarding claim 62, Deucher teaches that the housing is defined between the CT scanner subsystem and the paneling (figure 4).

Claims 44, 50-56 and 63-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deucher et al. (US 5610968) in view of Krug et al. (US 5974111).

Regarding claims 44, 51-52 and 67, Deucher teaches an apparatus which includes:

- a base frame (A);
- tunneling (12) mounted to the base frame and having a first end (42) and a second end (44) opposing the first end;
- an x-ray source (B) which, when operated, creates radiation within the tunneling;
- paneling (stationary gantry cover, A) located around the tunneling and the x-ray source so that the paneling and the base frame jointly define a housing (cavity of stationary gantry, A) around the tunneling and the x-ray source, the housing having an entry aperture (60), and an exit aperture (50), and having an air inlet opening (60); and
- a fan (58) positioned to draw air through the air inlet opening into the housing, the housing being formed, the entry aperture sealing with the first end of the tunneling to an extent sufficient, and the exit aperture sealing with the second end of the tunneling to an extent sufficient so that the confines of the housing are at a higher pressure than externally of the housing when the fan draws air into the housing (if volume of the confined of the housing is smaller than external of the housing, pressure in the volume will be higher than external by physic's law, see figure 4) .

However Deucher merely teaches that the entry aperture is proximity to the first end and exit aperture is proximity to the second end of the tunneling.

Krung teaches an inspection system having elongated entrance and exit (figure 1)

In view of Krung, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate notoriously old and well known cooling system as taught by Krung to the system of Deucher in order to provide a flow cooling air through the elongated apparatus (figure 1). Accordingly, one would be motivated to locate the air entrance and exit any place within the apparatus because it would reduce the size of the stationary gantry. Furthermore, it should be noted that rearrangement of location of the part(s), that is, rearranging the mirror and reflector to reflect the first light and the second light substantially perpendicular to the reflector and separating element, are not consider novel (see In re Japikse, 86 U.S.P.Q. 70 at 74), and therefore an obvious expedient.

Regarding claim 50, Deucher teaches
a support structure (A) having a lower end secured to the base frame and extending upward therefrom; and
a CT scanner subsystem (C) rotatably mounted to the support structure, the x-ray source forming part of the CT scanner subsystem and rotating therewith, the housing being externally of the CT scanner subsystem (figure 1).

Regarding claim 53, Deucher teaches an air-conditioning unit (58); and a duct connecting the air-conditioning unit with the plenum (54) so that air is directed from the air-conditioning unit through the duct into the confined volume.

Regarding claim 54, Deucher teaches that the air flows through the fan before flowing through the housing (figure 4).

Regarding claim 55, Deucher teaches that the air is recirculated by the fan after pressurizing the housing (figure 4).

Regarding claim 56, Deucher teaches that the fan is located externally of the housing (figure 4).

Regarding claim 63, Deucher teaches
operating an x-ray source (B) to radiate confines of tunneling; and
operating a fan to draw air into a housing defined externally of the tunneling
and internally of paneling around the tunneling, the air pressurizing the housing
(if confined volume of the housing is smaller than external of the housing, pressure in the volume will be higher than external by physic's law, see figure 4) .

Regarding claim 64, Deucher teaches that the air is recirculated by the fan after pressurizing the housing (figure 4).

Regarding claim 65, Deucher teaches that rotating a CT scanner subsystem (C), the x-ray source forming part of the CT scanner subsystem and rotating therewith (figure 4).

Regarding claim 66, Deucher teaches that directing the air through the CT scanner subsystem and through a radiator of the CT scanner subsystem (figure 4).

Claims 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deucher as modified by Krung et al. further in view of Peschmann et al. (US 5182764).

Regarding claim 57, Deucher as modified by Krung fails to teach a method conveying an object on a belt through the CT scanner.

Peschmann teaches the conveyor (20).

In view of Peschmann, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to adopt the conveyor in order to transport an object through the CT scanner subsystem (figure 1). Accordingly, one would be motivated to adopt the conveyor because it would provide continuous automatic object transportation mechanism.

Regarding claim 58, Deucher as modified by Krung teaches a support structure (A) having a lower end secured to the base frame and extending upward therefrom; and a CT scanner subsystem (C) rotatably mounted to the support structure, the x-ray source forming part of the CT scanner subsystem and rotating therewith, the housing being externally of the CT scanner subsystem and the belt transporting the object through the CT scanner subsystem.

Regarding claim 59, Deucher as modified by Krung fails teaches an x-ray line scanner subsystem radiating the object prior to being radiated by the CT scanner subsystem.

Peschmann teaches the line scanner (figure 1).

In view of Peschmann, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to adopt the line scanner in order to determine exact position of the object on the conveyor (column 4 line 5+). Accordingly,

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one would be motivated to adopt the line scanner because it would save time by eliminating the necessity of CT scanning the entire object (column 4 line 18+).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon K Song whose telephone number is 703-308-2736. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-4858 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000

Hoon K. Song
November 18, 2002